

### Amendments to the Specification:

Please replace the paragraph beginning on page 4, line 15 (paragraph [0008]<sup>1</sup>) with the following amended paragraph:

[0008] Product R (~~RETICULOSE~~) and RETICULOSE<sup>®</sup> ~~is a~~ are synthesized preparation preparations that ~~contains~~ contain a mixture of peptide nucleic acids, breakdown components of bovine serum albumin, and, probably, free nucleosides. Although little is known about the chemical nature of ~~Product R~~ RETICULOSE<sup>®</sup>, its biological activities have been demonstrated in effective treatment of influenza in the 1930's, in stimulation of growth of bone marrow cells and granulocytes in rabbits post-irradiation in the 1950's, and significant improvement of life quality and immunologic profile of AIDS patients in a most recent clinical trial. To understand ~~Product R~~ RETICULOSE<sup>®</sup>-mediated immunoregulatory activities, Chen and Hirschman have made efforts in testing its biological effect on the production of cytokines by HIV-infected human T cell lines and primary peripheral blood mononuclear cells (PBMCs). J. Investig. Med 1996; 44:347-351. Their primary finding clearly demonstrated that ~~Reticulose~~ RETICULOSE<sup>®</sup> potentiated the production of IFN-gamma and IL-6 as well as inhibited HIV replication in PBMCs.

Please replace the paragraph beginning on page 9, line 2 (paragraph [0018]) with the following amended paragraph:

[0018] Preparation of Product R: as used herein, Product R is the product produced according to either of the following methods. ~~Product R is provided by Advance Viral Research Corporation (Yonkers, New York).~~

Please replace the paragraph beginning on page 12, line 1 (paragraph [0025]) with the following amended paragraph:

[0025] Electroporation of cells: To introduce Product R into H9 or U937 cells, the cells from the above cultures are harvested at the exponential phase by centrifugation. Preferably, the cells are centrifuged at 1200 r.p.m at 40°C. for 10 minutes. Then the liquid portion of the culture is removed, leaving the cell pellets (about  $4 \times 10^6$ ) at the bottom of the centrifuge tubes. The cell pellets are resuspended in 20 ml of a suitable medium, preferably serum-free RPMI 1640 medium and then centrifuged again. After the second centrifugation, the medium is completely removed. The cells are resuspended in various concentrations of Product R, e.g., at concentrations between 0 to 100%, diluted with cold serum-free RPMI 1640 medium

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<sup>1</sup> For convenience, paragraph numbers refer to those numbered in U.S. Patent Application Publication No. 2001/0049351, published on December 6, 2001.

or other suitable medium. The resuspended cells are then transferred into electroporation cuvettes (for example, cuvettes of 4 mm gap, BTX), about 400µl per cuvette. The electroporation is performed at a voltage of about 150 V, preferably, using an electroporator from BTX (ECM 395, BTX, San Diego, Calif.) or from any other manufacturer of a like machine. After the electroporation, the cells are transferred into a culture flask that contains 15 milliliters of complete medium in each, and cultured under standard conditions as would be apparent to a person of ordinary skill in the art, for example at 37°C.-5% CO<sub>2</sub> for about 14 to 18 hours. To evaluate the effects of Product R on the viability of the cells and on nonspecific inhibitions of gene expression, control cells, i.e. the electroporated H9 or U937 cells in the absence of Product R, are employed. It has been found, Product R does not significantly affect the viability of these cells. Previous experiments have shown that Product R does not inhibit the expression of IL-2. ). J. Investig. Med 1996; 44:347-351. Thus, the level of the IL-2 expression of the cells may be used to determine nonspecific inhibitions of gene expressions. It has also been found that the IL-2 expression of the control cells is not significantly changed, indicating that little nonspecific inhibition occurs.